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AUTHOR Rainey, Anthony
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ABSTRACT

Whether preparation classes for the American College Testing (ACT) assessment actually raise student scores was studied with middle-class, private-school high school juniors and seniors of various ethnic backgrounds. The 1990-1991 test results for 30 students who had taken an ACT coaching course were compared with those of 30 students who had not. Findings are tabulated in terms of averages. The difference in mean scores was not statistically significant, suggesting no significant change for students who attended the coaching course and supporting the null hypothesis. However, care must be taken in generalizing from this study. It was true that students on the lower achievement level were more likely to gain one or two points after taking an ACT coaching course. It is theorized that students at the higher levels of achievement had already learned test-taking skills. It is also noted that an ACT coaching course might have positive effects on student attitudes that could translate into better test performance. (Contains 1 table and 13 references.) (SLD)

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EFFECT OF AMERICAN COLLEGE TESTING (ACT) COACHING COURSES ON AMERICAN COLLEGE TESTING SCORES.

Anthony Rainey

ACT Prep Coaching Courses have become a financial boom in the late 1980's and early 1990's. College bound students feeling the pressures of getting into colleges or universities have felt it justifiable to enroll in courses that would help boost their overall score on this exam. Is this faith justified? In some instances coaching in test taking skill courses can help boost scores, but how much and at what price is still a matter of dispute. In many cases, the typical gains of scores are very modest to the amount of time and money that the student invests to gain a higher score. In this study there is the need to know if a coaching course is beneficial for college bound students as opposed to striving for academic excellence within the classroom and trusting the credibility of the established educational system.

The ACT Assessment is a comprehensive evaluation performed in Grades 11 and/or 12. It contains four academic tests designed specifically to measure student achievement in skills that are developed in high school. The tasks presented in the tests represent a side range of academic skills. They depend upon the student's skill in applying the content knowledge and reasoning skills acquired in high school. The ACT Assessment has four essential purposes. One is to help colleges and universities in their college admissions process. A second purpose is to provide educational and vocational planning for high school students. A third is to aid in academic advisement and counseling in post-secondary planning. The fourth is to aid in recruitment and retention. Levy and Levy (1991) notes that the ACT Assessment consists of four major tests: English, Mathematics, Reading and Science Reasoning. The English Test consists of 75 questions and lasts for 45 minutes. The Mathematics Test contains 60 questions and lasts for 60 minutes .

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The Reading test includes 40 questions and lasts for 35 minutes and the Science Reasoning test has 40 questions and lasts for 35 minutes. The English Test measures the student's comprehension of standard written English including punctuation, grammar and usage, sentence structure, and rhetorical skills. This test emphasizes analyzing the kinds of prose that students are required to read and write in high school and college, not mere recall of rules of grammar. Three scores are reported: a total English test score, a sub score in Usage/Mechanics and a sub score in Rhetorical Skills. The Mathematics Test assesses the student's achievement in mathematics. This test emphasizes solving practical problems included in courses taken in Grades 9, 10, and 11 (pre-algebra, algebra, intermediate algebra, plane geometry, coordinate geometry, and trigonometry). The test stresses the application of mathematical skills to quantitative reasoning and problem solving, not memorization of formulas, techniques or computational skills. Four scores are reported: a total Mathematics test score, a sub score in Pre-Algebra/Elementary Algebra, a sub score in Intermediate Algebra/Coordinate Geometry and a sub score in Plane Geometry/Trigonometry. The ACT Assessment Reading Test consists of one 35-minute section which assesses reading comprehension as a result of skill in reasoning and reference. This test requires students to answer questions about several reading passages by referring to what is specifically stated; reasoning to determine implications and inferences; and drawing conclusions, comparisons, and generalizations. The prose passages on the Reading Test are similar to those that appear in high school and college curriculum. They include passages in the arts, in literature, in social studies, and in the sciences.Prose fiction and humanities are reported in the Arts/Literature sub score. Social sciences and natural sciences are reported in the Social Studies/Sciences sub score. The three scores that are reported are a total reading score, a sub score in Arts/Literature and a sub score in Social Studies/Sciences. The Science Reasoning Test assesses the student's scientific reasoning skills. This test offers several sets of scientific information followed by test items. The scientific information is presented in three different

formats: Data Representation, Research Summaries and Conflicting Viewpoints. Test items require students to understand the basic features of a concept related the the information provided; to examine the relationships between the given information and the conclusions drawn or hypotheses developed; and to generalize from what is presented to gain new information, draw other conclusions or forecast future projections. A single Science Reasoning test score is reported. The first ACT test was formulated and accepted by state colleges and universities in 1959.

The American attitude of winning at all costs has now filtered down into the high school classroom arena in which parents and students feel a need to conquer. The development of coaching classes has permeated this idea. "How do I pass the ACT test and get into college with a decent score?" is the bottom line to this new field of dreams. There are still many questions to ask before enrolling or investing in a college coaching test course.

1. Is the student educational motivated to pass the test?
2. Is the student mentally capable of passing the test?
3. Was the educational background of the student advantageous for the student to pass the test?
4. Is the amount of money involved equivalent to the significance of the test score?

Stanley Kaplan (McCormick, 1987), who operates the nations oldest and largest test coaching firm, claims that thousands of high school students who have taken his course have raised their combined scores significantly, between their junior and senior year. Kaplan claims that the typical gain for the ACT score is between two to five points. There are to this date 126 permanent Kaplan coaching centers and 500 temporary centers across the United States. Fred Moreno (McCormick, 1987), assistant director of public affairs of the college board of New York City, contends that score gaining from coaching is very minimal. He feels that that a student's experience of taking the ACT exam

the second time, without coaching, will raise the score on experience alone.

Douglas Porter, a psychologist and principal associate at Harvard medical school states the longest and most challenging course that includes homework, practice tests and test taking strategies leads to the best results. Porter states, "Coaching does make a difference, statistically as well as practically" (McCormick, 1987). In many cases it is the weaker academic student who benefits the most because of the test taking skills which are taught in the course. The chances of the students significantly advancing on the exam are very high, though not necessarily passing the ACT exam. The average student probably has the most to gain, for this student will average three to five points more because of good testing background skills and the willingness to stay motivated to continue the course to the end. The least likely to gain from the ACT coaching course is the above average student. Since they have strong test taking skills, the coaching course would only enhance their decoding strategies and therefore would only slide out the ACT pile one or two points. The biggest problem in choosing an ACT coaching class is developing the strategies for the particular student. There are basically four different types of prep coaching courses (McCormick, 1987):

a. Familiarization course: this course teaches test taking skills and reviews the kinds of questions likely to be encountered on the ACT testing.
b. Memorization course: this course relies on routine practice and teaches techniques on how to narrow your choices to make intelligent guesses.
c. Academic course: this course emphasizes cognitive skills on how to analyze and determine what a word means by dissecting it into root words.
d. Syndicate course: this course combines facets of all three of the above courses. This course is the rarest and probably the most unpopular of all the courses combined.

The coaching course can be a heavy expense for the high school student. The average cost for a course is between $250 and $450 for 33 hours of instruction over a ten week period. A student can repeat the course at no extra charge within one year, if they so desire (McCormick, 1987).

Choosing the right coaching philosophy for the student will determine the success rate of the child. The thought of doing a better job of "decoding" the test is motivation enough for the student.

Wrightstone gives an example of the "old school" position of student readiness for testing. He states, "No one should use any form of a nationally standardized test and it is unethical to administer or discuss with pupils a parallel form or the specific form of a test to be used" (Kaminski and Mehrens, 1989).

The new position of coaching prep courses is discussed by S.A. Cohen (Kaminski and Mehrens, 1989), who advocates Criterion Reference Instruction (CRI). CRI presents the identical task to be learned in both the instructional process as well as in the final assessment, an ideal way to insure the precise match among what is taught, what is measured and what is intended to be learned. The effect, when used properly, is near perfect learning.

Attitudes and practices toward test preparation have a tendency to judge both the quality of the schools, and individual teachers based upon the students' scores on the standardized exams. The result is an increase on the pressures to teach test-taking skills in and out of the classroom.

Foreman (Kaminski and Mehrens, 1987), author of the book Scoring High, states that to provide students with some type of learning oriented practice in the test taking skills over an extended period of time is the best possible way for a student to juncture. Short, quick courses which concentrate on a great amount of material and little time is not of much use to a student if the student wishes to improve. Foremen therefore designed a program for the following:

1. Provide meaningful instruction on important objectives of the subject area concerned which would also reflect the most commonly occurring objectives in the frequently used norm referenced testing program.
2. Provide practice in taking a test using a variety of testing formats that exists in the testing program.
3. Provide the student with test taking skills which would make the student a more efficient and accurate test taker. It is important that the program not be an effort to teach the test, but to teach content based test taking skills, which would improve the students ability not only to pass the ACT test but honestly reflect upon the academic improvement in the classroom.

Bangert-Drowns, Kulik and Kulik (1983) conducted a meta analysis study in 1983 on 30 controlled classes focusing on the effectiveness of coaching for achievement tests. They found that 25 of the 30 studies showed that the coaching program had a positive effect on the test performance. The average sized classroom was 25. The areas of concern were test readiness, mental preparation, lower anxiety rate and self-confidence that led to higher achievement scores.

The casual comparative research evidence related to the effectiveness of American College Testing Coaching Courses on American college testing scores is inconclusive. Some studies have found no need for a student to be coached if the student is doing what is expected in the classroom over the period of four years of high school education. It is also felt to be a waste of time, effort and money. Others have felt that intensified coaching raises the level of mental awareness and is very beneficial for any child who becomes involved in a coaching course. The two biggest concerns of the study are that of the motivation of the student, parents and the for-profit organization who propose that the course is needed to be successful, and the educational background of the student. If the student is a below average student in the classroom the

student stands to gain the most from coaching courses because the educational gap is so big. The average student will probably remain in the middle of the scale on the ACT with or without coaching and may gain three to four points on the ACT. The above average student will gain the least from a coaching experience and the average gain is that of one to two points. The gap of the scores are so small for the above average student that the gain is insignificant. It is hypothesized that junior and senior high school students who are taught in a coaching course for the ACT will not show a significant gain from the students who do not take an ACT coaching course. Therefore there is a need to determine the effect of ACT coaching courses on ACT scores.

It is hypothesized that junior and senior high school students taught in an ACT coaching course will not obtain significantly higher achievement scores than students who did not attend an ACT coaching course.

The population in this study were junior and senior students of Luther High School South, located in Chicago, Illinois. These students were of various ethnic backgrounds consisting of White, African-American, Hispanic, Latinos, and Asian-Americans. The students were from middle class families and communities. Thirty students were chosen at random who did not take an ACT coaching course and thirty students who did take an ACT coaching course within the years 1990-1991. Luther High School South's school records identified students who took the ACT test and coaching course between the years of 1990-1991.

Treatment of Data

The findings were tabulated in terms of averages. The data produced by the study will be mainly in statement form. After classifying the data, the scores were analyzed for preparation for the study. The main guideline for this approach was the actual achievement scores on the ACT. The findings were tabulated in terms of means and standard deviation. The t test was employed at the .05 level of confidence to determine if there is any statistically significant

difference between the mean score.

The samples for the study included junior and senior high school students of Luther High School South. Each year the students take the American College Test. From these junior and senior high school students, two groups were randomly selected. Subjects in one group took an American College testing coaching course while the subjects in the other group did not take any professional coaching courses. Results from the 1990-1991 ACT test scores were used. A **t** test ($p < .05$) for independent samples were done on the test to determine if there was a statistically sufficient change in the overall testing process. Table 1 summarizes the statistical analyses.

Table 1

	Mean	Standard Deviation	
M_1 = Non - coached students	$M_1 = 18.2$	$S_1 = 4.09$	$N_1 = 30$
M_2 = Coached students	$M_2 = 17.5$	$S_2 = 4.8$	$N_2 = 30$
	$t = .614$		

* Significant at .05 level

The difference in means is not statistically significant at the .05 level of confidence. The **t** scores of the 1991 results show no significant changes in those students who attended a coaching course and those students who did not attend a coaching course. Overall, the data lead to the acceptance of the null hypothesis. Junior and senior high school students taught in an ACT coaching course did not obtain significantly higher achievement scores than students who did not attend an ACT coaching course.

There are limitations to the results of this study. Student sampling was done from only one high school. Most of the students involved in the study were from similar family income levels. Parents of Luther High School South students must pay yearly tuition which immediately constitutes a greater parental involvement in education than that of some public schools. Luther

High School South is considered to be a college prep high school and students who attend this school are pressured to succeed in the ACT Test with or without a coaching course.

When examining this study it could be concluded that ACT Coaching Courses are not worthwhile or monetarily practical; however, care must be taken in drawing generalizations. It is significant to note that, although statistically, students who attended ACT coaching courses did not obtain significantly higher achievement scores than students who did not attend ACT coaching courses, students on the lower achievement level were more likely to gain one or two points after taking an ACT coaching course. For students on the lower end or middle of the ability scale those one or two points could mean acceptance to the college of the student's choice as opposed to alternative education. The question "Why do the students in the higher levels not benefit from a general ACT coaching course?" must also be examined. It is theorized that the test-taking skills have already been learned by these students. Perhaps a course for higher level students would have better results if the course was aimed at specific objective weaknesses of the students.

It is difficult to put a "score gain" on all benefits of the ACT coaching course. A positive attitude, low anxiety level, and high self-confidence are factors in any test-taking situation. Students who have taken the ACT coaching course are more likely to exhibit those attitudes and be more secure in their test-taking ability while taking the ACT, whatever the skills and ability level of the student. For parents who try to assist their children to academically succeed, the ACT coaching course is one way for them to help students succeed at the high school level.

Profit gains and student involvement show that ACT coaching courses will remain in our education system. For these courses to be the most beneficial to the students involved, the sponsoring agencies need to assess the levels of student gain and reassess the coaching courses to suit the abilities and needs of the individual student. The courses need to be designed to benefit all students. If ACT coaching courses are reexamined and focused on student

academic strengths and weakness the courses could have significant influence on student ACT test scores; however, until this is accomplished students need to decide if the present coaching courses will benefit each individual student's academic needs and future educational plans.

Bibliography

Ang, Cheng H and Noble, Julie. "Incremental Validity of ACT Assessment Scores and High Schol Course Information for Freshmen Course Placement., ERIC. Assession No.ED373070, 1993

Bangert-Drowns, R.L. Kulik and J.A. Kulik. "Effects of Coaching Programs on Achievement Test Scores." Review of Education Research. 53, p. 571-585, 1983.

Carris, Joan. "Coaching Kids for the SAT. Executive Director. Vol. 17, No.1, p. 28-31, January 1995

Diamond, Bill. "Test Makeovers" Seventeen. October 1989, p. 44.

"Does Coaching Raise ACT Scores?" Phi Delta Kappan Vol. 62, p. 68-69, September 1980.

Harris, Major and Rohfeld, Rae. "SAT/ACT Preparation Program: A Team Approach." Working Paper Series Lecture Series. p. 4-8.

Kaminski, John and Mehrens, William. "Methods for Improving Standardized Test Scores: Fruitful, Fruitless, or Fraudulent?" Educational Measurement Issues and Practice. Volume 8, No. 1, Spring 1989, p. 14-21.

McCormick, Kathleen. "Cramming for College" Changing Times. September 1987, Vol 41, No. 9, p. 61-63.

Levy, Joan U., and Levy, Norman. ACT: American College Testing Program. 1991, p. 1-2.

Mehrens, William. "Preparing Students to Take Standardized Achievement Tests." Tests, Measurements and Evaluation. December 1989, p. 2-9

Neal, Kathy. "Predicting Achievement in a Teacher Preparatory Course of Reading Methods from the ACT and Teale-Lewis Reading Attitude Scores." Reading Psychology, and International Quarterly. 11:131-139, 1990

Schaeffer, Robert. "A Better Grade of Entrance Exam" Newsweek. January 16, 1989.

Smyth, Fredrick. "Commercial Coaching and ACT scores. The effects of College Preparatory Students in Private Schools." Journal of College Admissions. No. 123, p. 2-9, Spring 1989